

CDM FEDERAL PROGRAMS CORPORATION

November 6, 1991

Ms. Donna McGowan
TES VII Regional Project Officer
U.S. Environmental Protection Agency
341 Chestnut Street
Philadelphia, Pennsylvania 19107

PROJECT: EPA CONTRACT NO: 68-W9-0004
DOCUMENT NO: TES7-C03045-EP-CNVB
SUBJECT: Work Assignment C03045
July Monthly Report for
Remedial Design and Remedial Action Oversight
Harvey and Knott Drum Site
TES7-C03045-RT-CNVC-02

Dear Ms. McGowan:

Please find enclosed the July Monthly Report for Remedial Design and Remedial Action Oversight at the Harvey and Knott Drum Site as partial fulfillment of the reporting requirements for this work assignment. The preparation and subsequent submission of this report was delayed because the period of performance for this work assignment expired in July 1991 and was extended on September 24, 1991.

If you have any comments regarding this submittal, please contact me at (215) 293-0450 within two weeks of the date of this letter.

Sincerely,

CDM FEDERAL PROGRAMS CORPORATION (FPC)

Mark d'Elliciantonio
Regional Manager

MdF/slf

Enclosure

cc: Paula Retzler, EPA Work Assignment Manager, CERCLA Region III
Jean Wright, TES VII Zone Project Officer (letter only)
Constance V. Braun, FPC Program Manager
Robert Murphy, Versar Inc. (letter only)

JULY MONTHLY REPORT
REMEDIAL DESIGN AND REMEDIAL ACTION OVERSIGHT
HARVEY AND KNOTT DRUM SITE

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, D.C. 20460

Work Assignment No.	:	CC3045
EPA Region	:	III
Site No.	:	3D32
Contract No.	:	68-W9-0004
CDM FEDERAL PROGRAMS CORPORATION Document No.	:	TES7-C03045-RT-CNVC-02
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AR304082

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1.0 INTRODUCTION

CDM Federal Programs Corporation (FPC) received a work assignment under the Technical Enforcement Support (TES) VII program (EPA Contract No. 68-W9-0004, WA No. C03045) to perform oversight of the remedial design and remedial action (RD/RA) activities at the Harvey and Knott Drum site, located in New Castle County, Delaware. FPC has subcontracted a TES VII Team Member to perform the technical activities of this work assignment. The TES VII Team Member's objectives during the oversight are (1) to observe, document, and evaluate site activities, and (2) to convey information and concerns to EPA relevant to the RP contractor's implementation of the work plan and possible threats to human health and the environment associated with site activities.

The primary objective of the RD/RA program at the Harvey and Knott Drum site is to mitigate or eliminate environmental contamination and migration at the source area. The Record of Decision, dated September 30, 1987, stipulates the following RD/RA activities: (1) cleaning the onsite drainage pond, (2) removal of all surface drums and debris, buried drums, waste piles, and sludges with disposal at qualified RCRA facilities, (3) installation of site ground-water extraction and treatment facilities, (4) preparation of the site surface for the flushing pipe network installation, and (5) extensive environmental assessment of wetlands and surface waters adjacent to the site.

The site activities that occurred during July 1991 (i.e., semi-annual sampling) were included under Task 1 of the Remedial Action Work Plan (January 1987). The TES VII Team Member performed field oversight and split sampling during this activity.

2.0 SUMMARY OF ACTIVITIES

During July, the RP contractor collected surface water and ground-water samples during the semi-annual sampling event (Task 1). The RP contractor's activities that were observed by the TES VII Team Member (July 15, 16, and 17, 1991) are summarized below. Copies of the TES VII Team Member's field notes, which provide details of the RP contractor's activities, are provided in Attachment 1.

2.1 RP Contractor Activities

Clean Technologies was hired as the RD/RA management contractor by General Motors Corporation, a responsible party (RP). Clean Technologies subcontracted International Technologies Corporation (IT Corporation) to perform the semi-annual sampling activities.

During the TES VII Team Member's oversight in July 1991, the following personnel were onsite:

<u>Person</u>	<u>Affiliation</u>	<u>Dates Onsite</u>
R. Meier	TES VII Team	July 15, 16, and 17, 1991
M. Schlenger	IT Corporation	July 15, 16, and 17, 1991
J. Clements	IT Corporation	July 15, 16, and 17, 1991
V. Sawyel	IT Corporation	July 15, 16, and 17, 1991
J. Lucy	Clean Technologies	July 17, 1991

Surface water and ground-water samples were collected during the semi-annual event. The RP contractor collected one ground-water sample from monitoring well MW-110A on Monday, July 15, 1991. On Tuesday, July 16, 1991, the RP contractor collected ground-water samples from monitoring wells MW-108SA, MW-112A, MW-111A, MW-111B, and MW-109S. On Wednesday, July 17, 1991, the RP contractor collected ground-water samples from monitoring wells MW-105SA, MW-105D, MW-117B, and MW-116B.

Additionally, the RP contractor collected surface water samples from the beaver pond (SW-7) located on the western side of the site on July 17, 1991. Samples were obtained by submerging the sample containers directly into the pond. New PVC gloves were used at each location during the sample collection. Field measurements for the surface water were taken at the pond and the results are presented in Table 1.

TABLE 1

SUMMARY OF SURFACE WATER AND GROUND-WATER SAMPLING AND FIELD MEASUREMENTS
CONDUCTED BY IT CORPORATION AT THE HARVEY AND KNOTT DRUM SITE IN NEW CASTLE
COUNTY, DELAWARE DURING THE TES VII TEAM MEMBER'S OVERSIGHT IN JULY 1991

Sample Location Number	Conductivity umhos/cm	pH	Temperature °C	Turbidity	TES VII Team Member Sample Number
MW-110A	335	6.57	19.2	Turbid	GW-2
MW-108SA	60	6.08	15.8	Turbid	GW-1
MW-112A	100	5.20	17.9	Turbid	-----
MW-111A	180	6.54	22.4	Turbid	GW-3
MW-111B	120	6.52	17.5	Turbid	-----
MW-109S	75	6.25	18.1	Turbid	-----
MW-105D	85	6.54	19.0	Turbid	-----
MW-105SA	80	5.36	18.0	Turbid	-----
MW-117A	175	6.78	17.5	Turbid	GW-4 & GW-6
MW-116B	120	6.56	18.2	Turbid	GW-5
SW-7	105	6.11	31.6	Turbid	SW-1

Prior to conducting ground-water sampling, the RP contractor purged a minimum of three times the volume of standing water from each well. A centrifugal pump and dedicated polyethylene tubing were used to purge the shallow 2-inch diameter wells, and a 2-inch diameter submersible pump and dedicated polyethylene tubing were used to purge the deep 2-inch diameter wells. A centrifugal pump and dedicated polyethylene tubing were used to purge the shallow 4-inch diameter wells, and a 4-inch diameter submersible pump and dedicated polyethylene tubing were used to purge the deep 4-inch diameter wells. The purge rate was determined at each sample location by measuring the time interval to fill a one-gallon container. Between each shallow well, the centrifugal pump was decontaminated by replacing the polyethylene tubing which led from the well to the above-ground pump. Between each deep well, the 2-inch and 4-inch diameter submersible pumps were decontaminated by spraying DI-water on the exterior of the pump and by cleaning the electrical cord using DI water. None of the pumps were flushed with a soap and water rinse or DI water.

Before purging, the RP contractor measured the depth to water below the top of the well casing using a electronic water level meter. This measurement, along with the known depth and diameter of the well, was used to determine the volume of water that needed to be purged. The water level meter was decontaminated between each well by washing with DI water.

Following well purging, ground-water samples were obtained from the 2-inch and 4-inch diameter wells using laboratory-cleaned, dedicated stainless steel bailers on a dedicated length of rope. The bailers were decontaminated as follows:

- Soap and water wash,
- DI water rinse,
- Nitric acid wash,
- DI water rinse,
- Acetone wash,
- DI water rinse, and
- Air dry

All samples were poured directly from the bailer into the sample containers. Samples for dissolved TAL metals were poured into a separate plastic water jug and were taken to the field trailer for filtration. Field

measurements for the ground water were taken at each location, and the results are presented in Table 1.

2.2 TES VII Team Member Activities

On July 15, 16, and 17, 1991, the TES Team Member observed the RP contractor's semi-annual sampling activities and accepted a surface water split sample at location SW-7 (beaver pond surface water), and accepted ground-water split samples at locations MW-110A (with extra volume for a matrix spike and matrix spike duplicate), MW-108SA, MW-111A, MW-116B, and MW-117B (including a duplicate sample).

A trip blank was carried throughout the sampling event, and an equipment rinsate blank was obtained from the RP contractor's decontaminated bailer prior to sampling well MW-111A. The equipment blank was prepared by pouring HPLC water over a laboratory-cleaned bailer and collecting the rinsate in sample bottles for analysis of volatile organic compounds, semi-volatile organic compounds, pesticides, and PCBs (TCL organics). The equipment blank for the inorganic parameters was prepared by pouring deionized water over a laboratory-cleaned bailer and collecting the rinsate in the appropriate sample bottles for dissolved metals and cyanide analyses. The trip blank was prepared at the TES VII Team Member's office by pouring HPLC water into two 40-ml VOA vials for analysis of volatile organic compounds only.

Ground-water and surface water samples were obtained by alternately filling the RP contractor's and the TES VII Team Member's sample containers as follows: volatile organics, semi-volatile organics, pesticides, PCBs, metals, and cyanide. Ground-water samples were collected directly from the RP contractor's stainless steel bailer, and the surface water samples were collected by submerging the sample containers directly into the pond. The RP contractor used clean PVC gloves at each sample location.

All ground-water and surface water samples were analyzed for TCL organics. In addition, the inorganic ground-water samples were analyzed for dissolved metals and cyanide, while the surface water samples were analyzed for total metals and cyanide. The ground-water and surface water samples were analyzed under CLP RAS Case Number 16814.

Ground-water samples for the dissolved metals analysis were filtered using the RP contractor's nitrogen filtration system. Volatile organics, dissolved metals, and cyanide samples were preserved with HCl, HNO₃, and NaOH, respectively. All samples were placed into coolers on ice after preservation.

The CLP sample numbers for the ground water and surface water samples collected at the Harvey and Knott Drum site are presented in Table 2.

TABLE 2

SUMMARY OF GROUND-WATER AND SURFACE WATER SAMPLES COLLECTED BY THE TES VII TEAM MEMBER AT THE HARVEY AND KNOTT DRUM SITE IN NEW CASTLE COUNTY, DELAWARE DURING THE TES VII TEAM MEMBER'S OVERSIGHT IN JULY 1991

Organic Sample No.	Inorganic Sample No.	Grid Pt. Location	TES VII Team Member Sample Number
CHW 03	MCHJ 04	MW-110A	GW-2 (MS/MSD)
CHW 03	MCHJ 05	MW-110A	GW-2 (MS/MSD)
CHW 02	MCHJ 02	MW-108SA	GW-1
CHW 02	MCHJ 03	MW-108SA	GW-1
CHW 08	MCHJ 14	-----	EB-1 (EQ. BLANK OF GW-3)
CHW 08	MCHJ 15	-----	EB-1 (EQ. BLANK OF GW-3)
CHW 04	MCHJ 06	MW-111A	GW-3
CHW 04	MCHJ 07	MW-111A	GW-3
CHW 05	MCHJ 08	MW-117B	GW-4
CHW 05	MCHJ 09	MW-117B	GW-4
CHW 06	MCHJ 10	MW-116B	GW-5
CHW 06	MCHJ 11	MW-116B	GW-5
CHW 07	MCHJ 12	MW-117B	GW-6 (DUP. OF GW-4)
CHW 07	MCHJ 13	MW-117B	GW-6 (DUP. OF GW-4)
CHW 01	MCHJ 01	SW-7	SW-1

3.0 PROBLEMS AND CONCERNS

No health and safety or sampling procedure problems or concerns were noted during the July 1991 oversight. However, while purging monitoring well MW-108D, the 4-inch diameter submersible pump became stuck in the well. Attempts to free the pump were unsuccessful. Therefore, this well could not be sampled during this sampling event. Additionally, it was noted that monitoring well MW-111A had been vandalized. The lock was torn off of the above-ground steel protective casing, and no well cap was present. The steel protective casing was also pushed over on 45 degree angle, causing the PVC casing to crack, and allowing small particles of the gravel pack to fall into the well. The RP contractor was still able to purge the well and collect water samples from this well, but could not rectify any of the damage caused by the vandalism.

4.0 RECOMMENDATIONS

The TES VII Team Member recommends that the RP contractor remove the submersible pump jammed in monitoring well MW-108D. If efforts to remove the pump are unsuccessful, the RP contractor should grout the well. Additionally, the steel protective casing for MW-111A should be replaced, and the PVC casing and gravel pack be fixed.

5.0 FUTURE ACTIVITIES

Once the results of the RP contractor's and TES VII Team Member's July semi-annual sampling event are available, a data evaluation report will be prepared and submitted. Other future activities include the review of the RP contractor's work plan for the removal of contaminated soils, once finalized.

ATTACHMENT 1
FIELD NOTES OF OVERSIGHT ACTIVITIES

AR304094

(89)

JULY 15, 1991

WEATHER - SUNNY, BREEZY, LOW HUMIDITY, TEMP = 80°F

9:00 VERSAR ARRIVES ONSITE. IT CORP.
ONSITE MOBILIZING EQUIPMENT AND
SETTING UP TRAILOR.

IT. PERSONNEL ARE:

MIKE SCHLENGER - SAMPLING SUPERVISOR
VAN SAWYEL - SAMPLING TECH
JIM CLEMENTS - SAMPLING TECH

10:00 IT & VERSAR PROCEED TO WELL 108 D
VERSAR DOES NOT SPLIT WITH IT.

10:10 IT REMOVES LID FROM WELL 108 D AND
RECORDS HEADSPACE READING; = 0 PPM ABOVE
BACKGROUND.

10:15 DESCRIPTION OF WELL 108 D

DOW = 300.0

DTW = 66.24

VOL TO PURGE = 457.78

10:34 IT BEGINS PURGING WELL 108 D. IT USES
4" Ø SUBMERSIBLE GRUNFOS PUMP. PUMP RATE
IS MEASURED TO BE APPROXIMATELY 10 GPM.

ASS IT CALIBRATES PHMETER FIRST USING A
7.00 PH BUFFER SOLUTION THEN 4.00 BUFFER
SOLUTION, FINALLY A 10.00 BUFFER SOLUTION
RTM

AR304096

(90)

7/15/91

11:00 IT COLLECT PURGED WATER FOR FIELD PARAMETER:

pH = TEMP = COND. = TURBID

1:20 PURGING STOPS APPROX 460 GALLONS PURGED OR
MORE THAN EX AMOUNT OF STANDING WATER IN WELL

11:40 IT. CANNOT GET ~~WELL~~ PUMP OUT OF WELL
IT APPEARS THAT ELECTRICAL CORD BECAME
DISLOADED FROM PUMP AND THE WIRES
LEFT ON PUMP ARE CAUSING IT TO JAM IN
THE WELL.

2:30 IT. + VERSAR BREAK FOR LUNCH. IT. WILL
TRY TO FIND SOME EQUIPMENT TO GET THE
PUMP OUT OF THE WELL.

4:00 IT. RETURNS FROM LUNCH AND PROCEEDS
BACK TO 10B-D TO TRY PUSHING THE
PUMP DOWN DEEPER INTO THE WELL TO
FREE UP THE WIRE.

1:300 ATTEMPTS TO GET PUMP OUT OF WELL
ARE UNSUCCESSFUL. IT. HEADS BACK
TO TRAILER TO SET UP ~~2" DIA~~ CENTRIFUGAL
PUMP FOR 2" Ø WELLS.

1:30 IT + VERSAR PROCEED TO MW-110A
VERSAR WILL SPLIT WITH IT. VERSAR PARAMETERS
ARE FOR UDA'S, BNA'S, DISSOLVED METALS
AND CN-

RTM

AR304097

(91) 7/15/91

DESCRIPTION OF MW-110A

ROW 13.0

DTW 6.34

VOL TO PURGE 3.19

1545 IT BEGINS PURGING MW-110A. IT USES CENTRIFUGAL PUMP W/ CLEAN TEFLON TUBING TO PURGE WELL.

1546 WELL IS PURGED, FLOW RATE OF PUMP MEASURED TO BE 3 GPM.

1600 IT COLLECTS SAMPLES FROM MW-110A. VERSAR SPLITS WITH IT AND RECEIVES ADDITIONAL SAMPLE VOLUME FOR MS/MSD. VERSAR DESIGNATES SAMPLE AS GW-2. SAMPLES ARE COLLECTED BY ALTERNATELY FILLING IT + VERSAR'S VOA SAMPLES FIRST THEN ~~COL~~ ALTERNATELY COLLECTING REMAINING SAMPLE PARAMETERS. EXTRA VOLUME FOR DISSOLVED METALS IS COLLECTED FOR FIELD FILTERING USING AT'S NITROGEN FILTRATION SYSTEM.

1645 SAMPLING IS COMPLETE, SAMPLES ARE PLACED ON ICE. IT. ~~VERSAR RETURNS~~ MEASURES FIELD MEASUREMENTS FROM WELL.

PH = 6.57, CONA = 335^{µm}, TEMP = 19.2°C, WATER IS TURBID

1700 VERSAR & IT. RETURN TO TRAILOR TO FILTER DISSOLVED METALS SAMPLE.

ATM

AR304098

(92)

7/15/91

1730 WORK FINISHED FOR THE DAY

1745 VERSAR + I.T. LEAVE SITE

Russell H. Warr

RM

AR304099

(43)

7/16/91

8:00 VERSAR ARRIVES ONSITE I.T. ONSITE PREPARING
BOTTLEWARE & SETTING UP EQUIPMENT

945 VERSAR & I.T. PROCEED TO MW-108 SA
DESCRIPTION OF WELL
ODW - 22.2
DTW - ~~6.2~~ 12.32
VOL TO PURGE - ~~3.5~~ 4.4

1017 I.T. BEGINS TO PURGE MW-108 SA. I.T. USES
CENTRIFUGAL PUMP & MEASURE FLOW VOLUME @ 3 GPM.

1019 PURGING COMPLETED 6 GALLONS PURGED

1030 I.T. COLLECTS SAMPLES FROM MW-108 SA. VERSAR
SPLITS WITH I.T.

1055 FIELD MEASUREMENTS ARE COLLECTED FROM MW-108 SA.
PH = 6.68, COND = 60 μ S, TEMP = 15-81 °C, WATER IS TURBID

1115 VERSAR & I.T. RETURN TO TRAILER TO DROP
METAL OFF SAMPLES FOR FILTRATION

1130 FL & VERSAR PROCEED TO MW-112 A
VERSAR DOES NOT SPLIT WITH I.T.

RTM

AR304100

(P)

1/12/91

DESCRIPTION OF WELL MW-112A

DOW - 16.0

DTW - 6.82

VTP - 4.40

PURGE BEGINS - 1151

" STOPS - 1153

PURGE RATE - 3 GPM

VOL PURGED - 6 GALLONS

1) I.T. COLLECTS SAMPLES FROM WELL

2) FIELD MEASUREMENTS ARE COLLECTED
PH = 5.20, QW = 100 MW, TEMP = 17.9 °C, WATER IS TURBID

40 VERSAR + I.T. RETURN TO TRAILOR

50 VERSAR + I.T. BREAK FOR LUNCH

45 BREAK IS DONE

50 VERSAR + I.T. PROCEED TO MW-111A +
111-B.

00 PRIOR TO PURGING WELLS VERSAR + I.T.
PERFORM A EQUIPMENT BLANK BY PURING
HPLC WATER + D.I. WATER ON I.T.'S TRAILOR.

DESCRIPTION OF MW-111A

DOW - 11.0

DTW - 5.57

VTP - 2.60

PURGE BEGINS - 1423

" STOPS - 1424

" RATE - 3 GPM

VOL. PURGED - 3 GALLONS

RTM

AR304101

(95)

7/16/91.

DESCRIPTION OF MW-111B

ROW	- 52.0	PURGE BEGINS	- 1427	
DTW	- 4.10	"	STOPS	- 1435
Vol. to PURGE	- 22.99 GALS	"	RATE	- 3 GPM
		Vol. PURGED	- 24 GALLONS	

1440 I.T. COLLECTS SAMPLE FROM MW-111A. VERSAR SPTS WITH I.T. AND DESIGNATES SAMPLE AS GW-3.

1450 I.T. COLLECTS SAMPLE FROM MW-111B. VERSAR DOES NOT SPLIT WITH I.T.

1511 I.T. OBTAINS FIELD MEASUREMENTS FROM MW-111B
PH = 6.52, COND = 120 μ M, TEMP = 17.5°C, WATER IS TURBID

1516 I.T. OBTAINS FIELD MEASUREMENTS FROM MW-111A
PH = 6.54, COND = 180 μ M, TEMP = 22.4°C, WATER IS TURBID

NOTE: MW-111A WAS TAMPERED WITH, LOCK WAS TWISTED OFF FROM WELL CASING, AND NO CAP WAS PRESENT. ADDITIONALLY WELL CASING WAS PUSHED OVER ON A 45° ANGLE, CAUSING THE PVC CASING TO CRACK AND GRAVEL PACK WAS EVIDENT IN THE WATER PURGED FROM THE WELL.

1530 VERSAR & I.T. RETURN TO TRAILOR. I.T. PREPARED TO PROCEED TO WELL MW-109S. VERSAR

RTM

AR304102

(46)

7/16/71

TO REMAIN AT TRAILER TO ASSITS IN THE
FILTRATION OF DISSOLVED METAL SAMPLES AND
PREPARE SAMPLE BOTTLES & APER FOR
SHIPMENT.

1730 IT. RETURNS FROM MW-1095 AND PROVIDES
INFORMATION OF WELL TO UERCAR

DOW	- 27-6	PURGE BEGINS	- 1624
DTW	- 2-54	"	STOPS - 1628
VOL TO PURGE	- 10-10	"	RATE - 3 GPM
		VOL	PURGED - 12 GALLONS

WELL SAMPLE AT 1635

FIELD MEASUREMENT COLLECTED @ 1700

PH = 6.25, COND = 75 μ S, TEMP = 18.1 $^{\circ}$ C, WATER IS TURBID

1820 UERCAR LEAVES SITE TO DROP OFF SAMPLES
AT FEDERAL EXPRES

1920 ~~SAMP~~ SAMPLES DROP OFFED AT FED EX. ONLY
ORGANIC SAMPLES SENT, INORGANIC SAMPLES
WILL BE SENT AT COMPLETION OF WORK.
ORGANICS SENT TO WANTEC UNDER FED EX
AIR BILL # 2916488741

ATMAR304103

(97)

7/17/91

0730 VERSAR AT SITE - GATE LOCKED

0800 I.T. ARRIVES ON SITE

0830 I.T. & VERSAR PREPARING EQUIPMENT & BOTTLEWARE FOR TODAY'S SAMPLING.

I.T. PERFORMS DECON OF BAILORS AS FOLLOWS:

- SOAP & WATER WASH
- DI WATER RINSE
- NITRIC ACID WASH
- DI WATER RINSE
- ACETONE WASH, AND
- DI WATER RINSE
- AIR DRY

930 I.T. PREPARING 2" Ø SUBMERSIBLE PUMP TO BE USED TODAY, HOWEVER, PUMP IS NOT WORKING CORRECTLY.

1030 2" Ø PUMP IS FIXED.

1045 VERSAR & I.T. PROCEED TO MW-105D & 105 SA

DESCRIPTION OF MW-105 SA

DDW	- 17.0	PURGE BEGINS	- 1105
DTW	- 10.82	" STOPS	- 1110
VOL TO PURGE	- 2.96	" RATE	- 1GPM
		VOLUME PURGED	- 5 GAL.

AR304104

(8)

7/17/91

DESCRIPTION OF MW-105 D

ROW - 83.0

DTW - 11.13

UTP - 34.49

PURGE BEGINS - 1110

" STOPS - 1122

" RATE - 3 GPM

VOL. PURGED - 36 GALS

I.T. USES 2" Ø SUBMERSIBLE PUMP TO PURGE
MW-105 D.

1205 I.T. COLLECTS SAMPLE FROM MW-105 D. VERGAR
DOES NOT SPLIT WITH I.T.

1130 I.T. COLLECTS SAMPLE FROM MW-105 SA. VERGAR
DOES NOT SPLIT WITH I.T.

1147 I.T. ~~COLL~~ OBTAINS FIELD MEASUREMENTS FROM MW-105 SA
PH = 5.36, COND. = 80 MU, TEMP = 18.0°C, WATER IS TURBID

1150 I.T. OBTAINS FIELD MEASUREMENTS FROM MW-105 D
PH = 6.54, COND. = 85 MU, TEMP = 19.0°C, WATER IS TURBID

1200 LUNCH BREAK

1245 LUNCH OVER. NEW 4" Ø SUBMERSIBLE PUMP
ARRIVES ON SITE, I.T. PREPARING PUMP TO
BE USED FOR NEW WELLS MW-116 B, MW-117 A
MW-118 B + MW-119 B

1315 JOHN LUCY, CLEAN TECH. ARRIVES ON SITE
VERGAR SHOWS JOHN DAMAGE TO MW-117 A

AB304105

(RVD)

(99)

7/17/91

1340 VERSAR, I.T., & CLEAN TECH. PROCEED TO
MW-117B

DESCRIPTION OF MW-117B - 4"Ø

DDW - 77.1

PURGE BEGINS - 1401

DTW - 3.18

" 3:05 - 1407

DL TO PURGE - 144.14

PURGE RATE - 25 GPM

DL PURGED - 150 GALLONS

1430 I.T. COLLECTS SAMPLES FROM MW-117B. VERSAR
SPLITS WITH I.T. ADDITIONALLY DUPLICATE
SAMPLE IS COLLECTED. VERSAR DESIGNATES
MW-117B SAMPLE AS GW-4 & DUPLICATE SAMPLE
AS GW-6.

1520 I.T. OBTAINS FIELD MEASUREMENTS ON MW-117B
PH = 6.78, GND = 175 MM, TEMP = 17.5°C, WATER IS TURBID

1513 I.T. & VERSAR PROCEED TO MW-116B

DESCRIPTION OF MW-116B

DDW 84.16

DTB 2.42

DL TO PURGE 159.39

1539 PURGING BEGINS. ACCORDING TO JOHN
MW-116B RECHARGES SLOWLY THEREFORE
I.T. PLACED A RESTRICTOR ON THE PUMP
LINE WHICH SLOWED DOWN THE PURGE
RATE TO 10 GPM.

(RIV)

AR304.106

22)

7/17/91

46 WELL WENT DRY ONE I.T. SAMPLER REMAINED
AT MW-116B TO ALLOW WELL TO RECHARGE
THEY RESUME PURGING. VERSAR & OTHER
I.T. SAMPLER LEFT MW-116B TO COLLECT
SURFACE WATER SAMPLE FROM SW-7
(BEAVER POND)

5:10 I.T. COLLECTS SURFACE WATER SAMPLE
FROM SW-7. VERSAR SPLITS W/I.T.
AND DESIGNATES SAMPLE AS SW-1. I.T.
COLLECTS SAMPLES DIRECTLY SUBMERGING
BOTTLEWARE INTO POND IN AN ALTERNATE
FASHION. VOA ARE COLLECTED FIRST ~~FROM~~
BY REMAINING SAMPLE PARAMETERS.

7:20 I.T. OBTAINS FIELD MEASUREMENTS ON SW-7
PH = 6.11, COND = ~~315~~¹²⁵ ~~µm~~, TEMP = 31.1°C, ELEVATION OF WATER = 3.35'

7:15 I.T. & VERSAR RETURN TO MW-116B, WELL
HAS BEEN PURGED & IS READY TO SAMPLE.
VERSAR SPLITS WITH I.T. AND DESIGNATES
SAMPLE AS GW-5

7:10 I.T. OBTAINS FIELD PARAMETERS ON MW-116B
PH = 6.56, COND = 120 µm, TEMP = 18.2, WATER IS TURBID

1800 VERSAR & I.T. PROCEED BACK TO TRAILER TO
FILTER OSS. METAL SAMPLES

(RIP)

AR304107

(10)

7/17/91

1830 VERSAR LEAVES SITE ~~AND~~ ~~1830~~

7/18/91

VERSAR SHIPS SAMPLES VIA FEDERAL EXPRESS

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